

6130.3900 BLASTING REQUIREMENTS.**Subpart 1. Air overpressure standards.** Air overpressure standards:

A. Air overpressure on lands not owned or controlled by the permittee shall not exceed 130 decibels as measured on a linear peak scale, sensitive to a frequency band ranging from six cycles per second to 200 cycles per second.

B. All open pit blasts shall be monitored by the operator. Monitoring stations shall be located adjacent to the nearest structure located on lands not owned or controlled by the permittee, and where the commissioner deems necessary to investigate complaints. Scram operators are not required to conduct air overpressure monitoring except as required for complaint investigation.

C. All open pit mining operators shall keep a blaster's log of production blasts for a period of at least six years containing the following:

- (1) date and time of blast;
- (2) type of explosive used;
- (3) ignition layout with locations of blast holes and time intervals of delay;
- (4) pounds of explosives per each delay of eight milliseconds or more;
- (5) total pounds of explosives;
- (6) type of material blasted;
- (7) monitoring locations and results of monitoring when conducted;
- (8) meteorological conditions, including temperature inversions, wind speed, and directions as can be determined from the U. S. Weather Bureau, and ground-based observations;
- (9) directional orientation of free faces of bench to be blasted; and
- (10) other information which the commissioner finds necessary to determine if the standards of this part and part 6130.3800 are achieved.

D. If a focusing condition is detected which could cause the blast to adversely affect populated areas, blasting shall be postponed until the condition is no longer present.

E. Blasting shall take place only during daylight hours unless a hazardous condition requires blasting at another time.

Subp. 2. Ground vibration control. Ground vibration control:

A. The maximum peak particle velocity from blasting shall not exceed one inch per second at the location of any structure located on lands not owned or controlled by the permittee.

B. The permittee shall either:

(1) monitor production blasts for peak particle velocity using a seismograph capable of measuring three mutually perpendicular peak particle velocities, with the peak particle velocity being the largest of these measurements; or

(2) utilize the scale distance formula $W=(d/60)^2$

where: W= the charge weight per delay (eight milliseconds or more), and d= the distance (in feet) from the blast to the nearest structure located on lands not owned or controlled by the permittee to determine the weight of allowable explosive per decay.

When the monitoring is chosen, or complaints are received, seismic measurements shall be conducted adjacent to the nearest structure located on lands not owned or controlled by the permittee and where the commissioner deems necessary to investigate complaints.

C. In the event of a complaint or when ground vibrations have or are likely to exceed the one inch per second standard, the commissioner shall require permittees using underground mining methods to maintain a blaster's log for the purpose of assessing ground vibration control.

Subp. 3. **Retention of monitoring data.** All monitoring data collected shall be saved for a period of six years and made available to the commissioner upon request.

Statutory Authority: *MS s 93.47*

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